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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/006,790

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Tomoaki Masuda

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EXAMINER

DI GRAZIO, JEANNE A

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,790

Applicant(s)

MASUDA ET AL.

Examiner

Jeanne A. Di Grazio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims

Claims 1-16 are pending. Claims 1 and 10 are amended. New claims 15 and 16 are added.

Priority

Priority is not claimed.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 and 10-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1 (amended), Applicant recites “an adhesive layer having an adhesive property on both sides” and then “wherein the adhesive layer has an adhesive force of not smaller than 10N/20mm.” It is not clear, in light of the limitation that the adhesive layer now has an adhesive property on both sides, whether the adhesive force of not smaller than 10N/20mm refers to only one side of the adhesive layer or to both sides of the adhesive layer. If referring to only to one side of the adhesive layer, the specific side to which the adhesive force refers could

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be crucial. Such uncertainty and ambiguity renders the claim indefinite and in particular since the adhesive force appears to be a major part of Applicant's claimed compensating film.

As to claim 10 (amended), Applicant recites, "coating an adhesive having adhesive property on both sides" and "setting the adhesive force between the optical compensating film and the layer to be 10 N/20mm or more." Similarly as in claim 1, it is not clear, in light of the limitation that the adhesive layer now has an adhesive property on both sides, whether the adhesive force of not smaller than 10N/20mm refers to only one side of the adhesive layer or to both sides of the adhesive layer. If referring to only to one side of the adhesive layer, the specific side to which the adhesive force refers could be crucial, especially since Applicant claims a compensating film made by applying an adhesive to a stretched norbornene-based resin film. Such uncertainty and ambiguity renders the claim indefinite and in particular since the adhesive force appears to be a major part of Applicant's claimed compensating film.

Furthermore, claim 10 (amended) appears indefinite because the method relates to a method of manufacturing a compensating film by applying an adhesive onto a stretched norbornene-based resin film. Therefore, the compensating film is the adhesive on the norbornene film. A limitation that places the adhesive force between the compensating film and the layer to be 10 N/20mm or more is inaccurate because the compensating film is the adhesive layer and norbornene film. [Compensating film = Adhesive layer (+) Norbornene-based resin film.] The adhesive force would have to be set between the layer and norbornene-based resin film.

For examination purposes, with respect to claims 1 and 10, the adhesive force is presumed to be applicable to a side of the adhesive layer and consistent with the prior art.

As to claims 2-7 and 11-16 they are rendered indefinite by virtue of their dependence on indefinite claims 1 and 10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 6-7 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagahama Hiroyuki et al. (JP 2000-082338) in view of Nakamura (United States Patent 5,568,290).

As to claims 1 (amended), 6 and 15: Nagahama et al. have a transparent conductive film, transparent touch panel, and liquid crystal display element (ABS, entire patent). In Nagahama, a retarder (Applicant's compensating film) is made from a norbornene-based film (Means for Solving the Problem at Page 3). Nagahama calls the norbornene film a "transparence high

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polymer film” referenced by numeral (11) in the drawings. The norbornene film furthermore consists of a uniaxial-stretching high polymer film (Means for Solving the Problem at Page 3)(Applicant’s “a stretched norbornene-based resin film”). Nagahama also has a “transparence conductivity thin film” (Applicant’s adhesive layer) that is adhered to the stretched norbornene film (Effect of the Invention at Page 5). The adhesive force of the layers is set to improve adhesive property (Effect of the Invention at Page 5). Nagahama also has a film thickness in the range of 50-200 micrometers (Means for Solving the Problem at Page 3).

Nagahama et al. do not appear to specify an adhesive force of not smaller than 10 N/20 mm.

However, Nagahama et al. do specify and teach a range of adhesive force (15g/15 mm or over (ABS, entire patent) for the purpose of improving adhesion (ABS, entire patent).

Specifically, Nagahama et al. instruct that such a laminate of stretched norbornene film and adhesive layer can favorably be interposed between a polarizing plate and liquid crystal panel in a stacked manner (ABS, entire patent). The laminate prevents exfoliation and cracking based on the adhesive force of the layers (Effect of the Invention at Page 5).

Nagahama et al. is evidence that ordinary workers in the field of liquid crystals, adhesives, compensating films, and polarizers would have had the reason, suggestion, and motivation to optimize the adhesive force of a laminate of adhesive layer and stretched norbornene films for the purpose of preventing peeling, cracking, and to improve adhesion.

Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals, adhesives, compensating films, and polarizers at the time the invention was made to optimize the adhesive force of a laminate of an adhesive layer and stretched norbornene film for the purpose

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of optimizing adhesion and to prevent exfoliation, cracking, peeling, and for a high endurance display device.

Nagahama et al. do not appear to explicitly specify that the adhesive layer has an adhesive property on both sides.

Nakamura teaches and discloses a transparent film (support), polarizing plate and compensatory sheet for use in a liquid crystal display (entire patent). To increase bonding strength between the transparent film and polarizing film as well as the polarizing film and optical compensatory sheet an acrylic adhesive is employed (other types of adhesives are also noted)(Column 16, Lines 45-56). The adhesive is used to bond the transparent film (which is a stretched norbornene-based resin film (Id.)(“Arton”)[Applicant’s enabling Specification at Pages 3 Lines 34-36 and Page 4 Lines 1-2 lists “Arton” as an example of a stretched norbornene-based resin film] with the polarizing film and the polarizing film and optical compensatory sheet. The acrylic adhesive must have adhesive properties on both sides in order to bond the polarizing film and transparent film and polarizing film and optical compensatory sheet with each other.

Please note that Applicant specifies in Applicant’s Response of April 23, 2004, that the adhesive layer has the adhesive property on both sides because of the “nature of the adhesive layer in the application as filed.” (Response, Page 5)(“Support for this recitation is immediately derived from the nature of the adhesive layer in the application as filed.”). Applicant notes, per Applicant’s Specification at page 4, that the adhesive for coating the stretched norbornene-based resin film, can include the following “well known” types: acrylic, silicon-based, polyester-based, polyurethane-based, polyether-based, rubber adhesives, and the like (SPEC Page 4, Lines 23-26). The Examiner interprets “the nature of the adhesive layer in the application as filed to mean that

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any of Applicant's stated well-known adhesives possess the property of having an adhesive property on both sides.

Nakamura is evidence that ordinary workers in the field of liquid crystals, adhesives, compensating films, and polarizers would have found the reason, suggestion, and motivation to incorporate a dual sided acrylic adhesive (or other suitable adhesive) into the device to improve bonding strength.

Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals, adhesives, compensating films, and polarizers to modify Nagahama in view of Nakamura to increase bonding strength.

As to claims 2-4, Claims 2-4 are product-by-process limitations and are not given patentable weight. Please note that patentability of a claim to a product does not rest merely on a difference in the method by which the product is made. Rather, it is the product itself which must be new and unobvious. Because the process recited adds no structural limitations, no patentable weight has been given to the process recited in claims 2-4 (MPEP 2113).

As to claim 7: Nagahama et al. do not appear to explicitly specify a stretching ratio for the norbornene film.

However, Nagahama et al. teach and suggest that retardation and birefringence depend on stretching (Means for solving the problem at Pages 3 and 4). Changes in the birefringence depend on changes in stretching.

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Nagahama et al. is evidence that ordinary workers in the field of liquid crystals, adhesives, compensating films, and polarizers would have had the reason, suggestion, and motivation to optimize stretching ratio for optimal birefringence and to affect birefringence.

Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals, adhesives, compensating films, and polarizers at the time the invention was made to optimize stretching ratio for optimal birefringence and to affect birefringence.

As to claims 10 (amended), 11 and 16, The method as recited by Applicant would have been obvious to one of ordinary skill in the art at the time the invention was made in light of the device as disclosed in Nagahama et al. in view of Nakamura. Furthermore, Nagahama teaches a surface treatment of corona discharge (entire patent).

As to claims 12-14, Claims 12-14 are not entitled to patentable weight because they are structural limitations. It has been held that to be entitled to patentable weight in method claims, the recited structure limitations therein must affect the method in a manipulative sense and not to amount to the mere changing of use of a particular structure.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagahama Hiroyuki et al. (JP 2000-082338) in view of Hani Tsutomu et al. (JP 05-212828).

Per claim 5: Nagahama et al. do not appear to explicitly specify that the adhesive layer is acrylic.

Hani et al. teach a composite sheet using an acrylic adhesive layer. The composite sheet has a high transparency, durability at high temperature and humidity, superior heat resistance, and physical strength (ABS, entire patent).

Hani et al. is evidence that ordinary workers in the field of liquid crystals, adhesives, compensating films, and polarizers would have had the reason, suggestion, and motivation to use an adhesive acrylic layer for a composite sheet that has a high transparency, durability at high temperature and humidity, superior heat resistance, and physical strength (ABS, entire patent).

Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals, adhesives, compensating films, and polarizers at the time the invention was made to modify Nagahama et al. in view of Hani et al. to incorporate an acrylic adhesive layer into a laminated structure for high transparency, durability at high temperature and humidity, superior heat resistance, and physical strength (ABS, entire patent).

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagahama Hiroyuki et al. (JP 2000-082338).

Per claims 8 and 9: Nagahama et al. have a transparent conductive film, transparent touch panel, and liquid crystal display element (ABS, entire patent). In Nagahama, a retarder (Applicant's compensating film) is made from a norbornene-based film (Means for Solving the Problem at Page 3). Nagahama calls the norbornene film a "transparence high polymer film" referenced by numeral (11) in the drawings. The norbornene film furthermore consists of a uniaxial-stretching high polymer film (Means for Solving the Problem at Page 3)(Applicant's "a stretched norbornene-based resin film"). Nagahama also has a "transparence conductivity thin film" (Applicant's adhesive layer) that is adhered to the stretched norbornene film (Effect of the

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Invention at Page 5). The adhesive force of the layers is set to improve adhesive property (Effect of the Invention at Page 5). Nagahama also has a film thickness in the range of 50-200 micrometers (Means for Solving the Problem at Page 3). Nagahama et al. also have a “transparence conductivity film” (adhesive layer) adhered to a polarizing plate (Effect of the Invention at Page 5).

Nagahama et al. do not appear to specify an adhesive force of not smaller than 10 N/20 mm.

However, Nagahama et al. do specify and teach a range of adhesive force (15g/15 mm or over (ABS, entire patent) for the purpose of improving adhesion (ABS, entire patent). Specifically, Nagahama et al. instruct that such a laminate of stretched norbornene film and adhesive layer can favorably be interposed between a polarizing plate and liquid crystal panel in a stacked manner (ABS, entire patent). The laminate prevents exfoliation and cracking based on the adhesive force of the layers (Effect of the Invention at Page 5).

Nagahama et al. is evidence that ordinary workers in the field of liquid crystals, adhesives, compensating films, and polarizers would have had the reason, suggestion, and motivation to optimize the adhesive force of a laminate of adhesive layer and stretched norbornene films for the purpose of preventing peeling, cracking, and to improve adhesion.

Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals, adhesives, compensating films, and polarizers at the time the invention was made to optimize the adhesive force of a laminate of an adhesive layer and stretched norbornene film for the purpose of optimizing adhesion and to prevent exfoliation, cracking, peeling, and for a high endurance display device.

Response to Arguments

Applicant's arguments with respect to claims 1 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's ONLY arguments have concerned an acrylic adhesive (with an adhesive property on both sides) with respect to the amendments made to claims 1 and 10. Applicant has not addressed any of the other rejections made to the remaining claims (2-9 and 11-14)(claims 15 and 16 being newly added) and therefore Applicant has acquiesced to the rejections of claims 2-9 and 11-14.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (571)272-2289.

The examiner can normally be reached on M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeanne Andrea Di Grazio

Robert Kim, SPE

Patent Examiner
Art Unit 2871



TARIFUR R. CHOWDHURY
PRIMARY EXAMINER